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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,389	02/15/2001	Ghassan Semaan	433.06	3002
22474	7590	03/23/2006	EXAMINER	
DOUGHERTY CLEMENTS 1901 ROXBOROUGH ROAD SUITE 300 CHARLOTTE, NC 28211			COFFY, EMMANUEL	
			ART UNIT	PAPER NUMBER
			2157	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/784,389

Applicant(s)

SEMAAN ET AL.

Examiner

Emmanuel Coffy

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendments***

1. This action is responsive to the amendment filed on January 6, 2006. Claims 1-17 directed to a method for "Address Resolution Protocol To Map Internet Protocol Addresses To a Node Transport Identifier" are pending. Claims 1-12, and 14-17 are amended.

***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant is advised that only the significant amendments are herein addressed, namely the amendments to claims 1 and 10. All objections not addressed in Applicant's response are herein reiterated.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beser et al. (US 6,654,387) in view of Akatsu et al. (US 6,378,000) in further view of Sistanizadeh et al. (US 6,963,575) and in further view of Disney et al. (US 6,289,388).

As for claim 1, it recites the definition of a table maintained in each network element, assigning an identifier within the first protocol for each network element, assigning an address corresponding to the second protocol, associating the first

protocol identifier with the address corresponding to the second protocol and an update timer with each protocol identifier.

Beser teaches the maintenance of a network address table such as an Address Resolution Protocol Table. (See col. 3, lines 13-15). Beser further teaches associating a time value with a network address at col. 31, lines 43-48. Beser fails to address the address mapping with identifier assignment.

However, Akatsu discloses a method for address mapping in a network with identifier assignment at col. 3, lines 30-55.

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of the maintenance of a network address table taught by Beser with the method for address mapping disclosed by Akatsu.

Such system would provide a method to map IP address to another protocol address and prevent entries in the tables from becoming stale by flushing the tables at the expiration of a specified time. A user may enjoy improved resource allocation and security in such system.

Beser and Akatsu do not explicitly disclose, "wherein the table maintained in each network element of the plurality of network elements is built automatically."

However, Sistanizadeh discloses said limitations at col. 13, lines 35-48.

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of the maintenance of a network address table taught by Beser and the method for address mapping disclosed by Akatsu with the enhanced data switching/routing disclosed by Sistanizadeh. With the accelerating rise in

the level of complexity and sophistication of e-commerce, real-time transaction processing, and media streaming, service levels must be defined and adhered to. This system would provide for QoS metrics that are clearly measurable, verifiable and reportable.

Beser, Akatsu and Sistanizadeh do not explicitly disclose: "advertising an association of the addresses corresponding to the first and second protocols, allowing each network element of the plurality of network elements to build the table; and wherein each of the network elements utilize the first protocol addresses to transmit data destined for other network elements via the first network." However, Disney discloses said limitations at col. 6, lines 2-42 especially lines 20-25. Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of the maintenance of a network address table taught by Beser, the method for address mapping disclosed by Akatsu and the enhanced data switching/routing disclosed by Sistanizadeh with the system disclosed by Disney. This system would avoid the costs associated with proprietary systems by allowing two computer systems to access a network via a network interface or element.

As for claim 2, it recites propagating the first network protocol identifier from each network at periodic intervals, resetting the update timer, removing a network element from the table if the timer reaches a pre-determined count value.

Beser teaches this timer concept extensively at col. 31, lines 41-51 and the propagation at periodic interval at col. 29, lines 29-38.

As for claim 3, it recites the step of defining a port number for each network element in the first network.

Microsoft Computer Dictionary (5<sup>th</sup> Ed.) defines port number as a number that enables IP packets to be sent to a particular process on a computer connected to the Internet. Some port numbers are “well known” numbers, are permanently assigned; for example, e-mail data under SMTP goes to port number 25.

Furthermore, Beser discloses the use of port number associated with a process on Table 2 (col. 10) and Fig. 17 . Therefore, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of associating port number with a process as disclosed by Beser with the method for address mapping disclosed by Akatsu.

This provides for a well architected network and claim 3 is rejected in further view of Microsoft Computer Dictionary. Applicant is advised that “Official Notice” is henceforth taken on the above matter.

As for claim 4, it does not recite any new significant limitation above and beyond claim 3 and is therefore, rejected for the same reason articulated above.

As for claim 5, it recites the limitation wherein the first network is configured in a ring topology.

A ring configuration topology as disclosed by Akatsu (See col. 9, lines 7-9) is well known and expected in the art. It would have been obvious to use a ring topology to

configure the network disclosed by Akatsu since the ring topology is known as a configuration for a Local Area Network (LAN). Again, a ring topology is well known in the art as a closed loop configuration, which allows a ring network to cover larger distances than star and bus networks.

As for claim 6, it recites the limitation wherein the first network is configured in a point-to-point network.

A point-to-point network as disclosed by Akatsu (See Fig. 5) is well known and expected in the art. It would have been obvious to use a point-to-point topology to configure the network disclosed by Akatsu since the point-to-point topology is known as a communications link in which dedicated links exist between individual origins and destinations. Again, a point-to-point configuration is well known in the art, which allows dedicated links between the origin and destination (satellite/dish antenna as opposed to cable tv systems) in a network.

As for claim 7, it recites the method of claim 5 wherein the first network is a SONET ring network and the first network protocol comprises the Internet Protocol operating over a SONET Data Communications Channel protocol.

Beser teaches the fundamentals of the Internet Protocol (IP) at col. 7, lines 1-8 even referencing the OSI model. Moreover, IP is well known in the art.

Additionally, Akatsu discloses the concept of data conversion from MPEG to SONET protocol. (See col. 9, lines 4-9).

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of IP taught by Beser with the method for data conversion from one protocol (MPEG) to SONET disclosed by Akatsu.

Such a system would cover larger distances than a star or bus network.  
Therefore, claim 7 is rejected.

As for claim 8, it recites the limitation wherein the method of claim 2 further comprises the step of maintaining a status of each network element in the table. Claim 9, it recites a limitation wherein the status of each network element comprises one of new node, updated node and deleted node.

Applicant explicates the notion of “a status of each network” on page 16, lines 10-15 of the specification. A status field indicates whether the node is new, updated or deleted.

Beser teaches a process of updating the table by deleting a certain network address at col. 31, lines 27-40 (See also col. 34, lines 1-4 and col. 2, lines 31-58). This scheme would enhance the efficiency of the network. Therefore, claim 8 and 9 are rejected.

#### Claims 10-15

These claims do not teach or define any significantly new limitation above and beyond claims 1-9 to warrant particular treatment, and therefore are rejected for similar reasons.



6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beser et al. (US 6,654,387) in view of Akatsu et al. (US 6,378,000) and in further view of Weiman (US 6,141,690).

Claim 16:

The method of claim 1, wherein said table is empty upon initiation.

Beser teaches the maintenance of a network address table such as an Address Resolution Protocol Table. (See col. 3, lines 13-15). Neither Beser nor Akatsu discloses the limitation wherein said table is empty upon initiation.

However, Weiman teaches the concept of putting the status of a buffer to EMPTY at a designated time or when some conditions are met (See col. 8, lines 38-45.)

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of IP taught by Beser and the system disclosed by Akatsu with the EMPTY status disclosed by Weiman. It helps to cycle the table a lot more quickly because there are other addresses that can be received on the network.

Claim 17:

The method of claim 10, wherein said table is empty upon initiation.

Beser teaches the maintenance of a network address table such as an Address Resolution Protocol Table. (See col. 3, lines 13-15). Neither Beser nor Akatsu discloses the limitation wherein said table is empty upon initiation.

However, Weiman teaches the concept of putting the status of a buffer to EMPTY at a designated time or when some conditions are met (See col. 8, lines 38-45.)

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of IP taught by Beser and the system disclosed by Akatsu with the EMPTY status disclosed by Weiman. It helps to cycle the table a lot more quickly because there are other addresses that can be received on the network.

### ***CONCLUSION***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Coffy whose telephone number is (571) 272-3997. The examiner can normally be reached on 8:30 - 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Coffy,  
Patent Examiner  
Art Unit 2157

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EC  
March 7, 2006

  
ARIO ETIENNE  
PRIMARY EXAMINER